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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,663	10/17/2003	Kazumi Nii	Q77686	8275

7590 04/02/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
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Washington, DC 20037

EXAMINER
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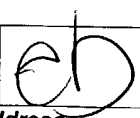
XU, LING X

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/686,663	<b>Applicant(s)</b> NII ET AL.	
	<b>Examiner</b> Ling X. Xu	<b>Art Unit</b> 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1,3 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,4,6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/499,460.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>3/23/2004</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/17/2003</u> . | 6) <input type="checkbox"/> Other: _____.   |

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

- a compound represented by formula (XI) as recited in claim 1,
- a compound represented by formula (XII) as recited in claims 2, 4 and 6-8,
- a compound represented by formula (XIII) as recited in claims 3 and 5.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

In addition, applicants is also required to identify an ultimate species of the elected species, which will be used as a starting point for search and examination purposes. An ultimate species is a species with all the elements in the formula identified.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after

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the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. Sheldon Landsman on 2/10/2004 a provisional election was made without traverse to prosecute the invention of species represented by formula (XII) as recited in claims 2, 4 and 6-8 and compound E1 on page 105 of the specification of the present application as the ultimate species. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 3 and 5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

3. The ultimate species was not found during the search for prior art and, therefore, the examination is now extended to other species in formula (XII) recited in claim 2. Claims 2, 4

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and 6-8 read on the elected species. Claims 1, 3 and 5 remain withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 4 and 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, it is unclear what is the “one combination made with Ar<sup>31</sup>, R<sup>32</sup>, R<sup>34</sup>, R<sup>35</sup>, R<sup>36</sup>, Z<sup>3</sup> and m is the same as or different from another combination made therewith”. It is unclear if the “one combination” and “another combination” are referred to the combination of some selected elements listed above in one group or some elements listed above may be combined to form condensed rings. Similar language is also used in claims 4 and 6-8, please clarify.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (JP-06-017046, Translation included).

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Suzuki discloses an organic electroluminescent (EL) element comprising a layer containing a specific phenylenediamine derivatives represented by formula (2), which contains the same structure as the formulas recited in claims 2, 4 and 6.

Specifically, examples of compounds 2-9, 2-10, 2-16 and 2-45 in Suzuki (translation, embodiments [0021]-[0030]) have the same structures as formula (XVI) recited in claim 6, wherein  $R^{74}$  and  $R^{77}$  are hydrogen,  $R^{78}$  is a substituent group, r and q are 1, t is 2, and  $Z^7$  represents atoms forming a 5, 6 or 7-membered ring.

The compounds 2-9, 2-10, 2-16 and 2-45 of Suzuki (translation, embodiments [0021]-[0030]) contain condensed rings in the position corresponding to the element  $Z^7$  in the claimed formula (XVI). It is the Examiner's interpretation that, in light of the description of the specification of the present application (see page 28, lines 4-7 of the specification), element  $Z^7$  in the claimed formula (XVI) includes 5, 6, or 7 membered ring which fused with other rings to form a condensed ring. Accordingly, Suzuki discloses the organic EL element comprising the same compounds as recited in claims 2, 4 and 6.

6. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (JP-07-120947).

Tanaka discloses a compound represented by formula (II), see claim 2 in English translation of Tanaka. It is the Examiner interpretation that, in light of the specification of the present application, the  $Z^9$  of formula (XVIII) represents atoms forming 5, 6, or 7-membered ring, which includes any atoms possible forming 5, 6, or 7-membered ring with any possible linking groups or substituents, such as 1, 3-indanedione nuclei (a 5-membered ring), barbituric

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acid and thiobarbituric acid and derivatives (a 6-membered ring), see pages 32-34 and 88 of the specification of the present application. Tanaka's compound represented by formula (II) has two barbituric acid groups (when X2 and Y2 are both oxygen) or thiobarbituric acid groups (when X2 and Y2 are both sulfur) on both sides of the formula, each bonded to a phenylene amino phenyl group (when R8 and R9 are both phenyl group). The central Ar group in Tanaka's formula (II) is a linking group corresponding to the L group of the claimed formula (XVIII) recited in claim 8. Accordingly, Tanaka discloses the same compound as represented in formula (XVIII), wherein Z<sup>9</sup> is a 6-membered ring, Z<sup>9</sup> and X<sup>9</sup> together form a barbituric acid group or thiobarbituric acid group, R<sup>94</sup>, R<sup>97</sup> and R<sup>98</sup> are hydrogen, q and r are both 1, t is 2, L is a divalent linkage group.

*Allowable Subject Matter*

7. Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Claim 7 is allowable because no prior art was found to disclose or suggest a luminescent device comprises the compound represented by formula (XVII).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ling X. Xu  
Examiner  
Art Unit 1775